

REMARKS

Claim 104 is indicated to be allowed. Applicants appreciate the recognition of patentable subject matter in the present application.

Applicants hereby add new claims 105-108 which include limitations of claims 59, 63, 76 and 82 and the respective base claims. Such claims are believed to be allowable in view of the indication that claims 59, 63, 76 and 82 recite allowable subject matter in the Office Action.

Claims 53-56, 60, 62, 64-65, 70-73, 77-79, 83-85 and 89-103 stand rejected for obviousness over MacLellan. Claims 57-58, 61, 66-67, 69, 74-75, 80-81 and 86-87 stand rejected over MacLellan in view of Nysen et al.

Applicants respectfully traverse the rejections and urge allowance of the present application.

Referring to claim 53, the interrogator is configured to reduce an amplitude of a component prior to demodulation of the modulated continuous wave signal. Claim 53 is allowable over the prior art of record.

On page 3 of the Office Action, it is stated that MacLellan discloses reducing (filtering) is performed prior to demodulation with reference to Fig. 2 and references 208, 210 and 212 thereof. Applicant disagrees. Referring to the explicit teachings in column 4, line 48 spanning to column 5, line 14 of MacLellan, it is stated that the reflected and modulated signal is received using antenna 206 and is amplified within a low noise amplifier 207. It is thereafter

clearly stated that interrogator 103 demodulates the signal using homodyne detection in quadrature mixer 208 down to the IF of the single subcarrier. Mixer 208 then sends a demodulated signal 209 to filter amplifier 210. Accordingly, following amplification, the received signal is immediately demodulated in mixer 208 providing demodulated IF signal 209. Components 208, 210, 212 cited in the Office Action clearly depict the first component 208 to receive the signal after application performs demodulation of the received signal. Accordingly, MacLellan fails to disclose or suggest an interrogator configured to *reduce an amplitude of the component prior to demodulation of the modulated continuous wave signal* as specified in claim 53. MacLellan fails to disclose or suggest positively recited limitations of claim 53 and claim 53 is allowable for at least this reason.

The claims which depend from independent claim 53 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

For example, claim 57 is patentable over the teachings of Nysen and MacLellan. A proper obviousness rejection requires motivation for one of ordinary skill in the art to combine or modify reference teachings. There is no motivation to combine the teachings of Nysen with the teachings of MacLellan, and there is no indication that the inapposite reference teachings could in fact

be combined. Nysen is not concerned with backscatter communications, continuous wave continuations or radio frequency identification device communications. In fact, Nysen is devoid of any such reference teachings despite the assertions in page 4 of the Office Action that Nysen discloses a backscatter signal or continuous wave signal. Applicants have electronically searched Nysen and have failed to uncover any such teachings.

In addition, MacLellan refers to homodyne detection as set forth in line 55 of column 4 while Nysen concerns heterodyne mixing as set forth in lines 41-42 of column 5. Further, Nysen clearly refers to communications of signals having a plurality of frequency values within a prescribed frequency range responsive to the voltage V as set forth in column 6, line 64 spanning to column 7, line 5, and such teachings do not disclose or suggest continuous wave teachings and are not combinable with the continuous wave teachings of MacLellan. The communication systems of Nysen and MacLellan fail to disclose or suggest the communication system of claim 57. Claim 57 is allowable over the prior art of record.

Claim 90 recites the interrogator is configured to reduce the amplitude of the component prior to quadrature demodulation of the modulated continuous wave signal. As clearly set forth in the teachings of MacLellan, mixer 208 first receives and demodulates the signal from amplifier 207, and column 4, line 56 of MacLellan indicates the mixer 208 is a quadrature mixer. Limitations of claim

90 are not shown or suggested in the prior art of record and claim 90 is allowable for at least this additional reason.

Claim 60 recites a receiver configured to reduce the amplitude of the component prior to demodulation of the modulated continuous wave signal. MacLellan fails to disclose or suggest any reduction in amplitude of the component prior to demodulation of the modulated continuous wave signal as positively recited in claim 60. Following amplification, quadrature mixer 208 provides demodulation of the received signal. The teachings of MacLellan fail to disclose or suggest positively recited limitations of claim 60 and claim 60 is allowable for at least this reason.

The claims which depend from independent claim 60 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 64 recites a receiver configured to adjust a local signal responsive to the communication signal, and to reduce an amplitude of a component of the communication signal using the adjusted local signal while substantially maintaining an amplitude of another component of the communication signal. Claim 64 is allowable over the prior art of record.

MacLellan fails to disclose or suggest the receiver configured to adjust a *local signal responsive to the communication signal and to reduce an amplitude*

of a component of the communication signal using the adjusted local signal as defined in claim 64. Referring to Fig. 2 of MacLellan, it is clear that signal 214 is directly applied to quadrature mixer 208. Such signal is directly applied from modulator 202 with absolutely no adjustment thereof occurring prior to application to mixer 208. Positively recited limitations of claim 64 are not shown or suggested in the prior art of record and claim 64 is allowable for at least this reason.

The claims which depend from independent claim 64 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 70 recites a communication method comprising, in part, reducing an amplitude of a component of a modulated continuous wave signal, and wherein the reducing comprises reducing prior to demodulation of the modulated continuous wave signal. Claim 70 is patentable over the prior art of record.

Following amplification within low noise amplifier 207, MacLellan initially demodulates the signal within quadrature mixer 208. MacLellan fails to disclose or suggest reducing an amplitude of a component of a modulated continuous wave signal prior to demodulation of the modulated continuous wave signal as specified in claim 70. No reduction of amplitude occurs prior to demodulation within mixer 208. Claim 70 recites limitations not shown or suggested in the prior art of record and claim 70 is allowable for at least this reason.

The claims which depend from independent claim 70 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 77 recites a communication method comprising, in part, reducing an amplitude of a component of the modulated continuous wave signal, the reducing comprising reducing prior to demodulation of the modulated continuous wave signal. Claim 77 is allowable over the prior art of record.

Fig. 2 of MacLellan clearly depicts the received signal being initially demodulated within quadrature mixer 208 following amplification within amplifier 207. MacLellan fails to disclose or suggest reducing an amplitude of a component of the modulated continuous wave signal prior to demodulation of the modulated continuous wave signal as specified in claim 77. Claim 77 recites limitations not shown or suggested in the prior art of record, and claim 77 is allowable for at least this reason.

The claims which depend from independent claim 77 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 83 recites a communication method comprising, in part, reducing an amplitude of a first component of the communication signal comprising adjusting

the local signal responsive to the communication signal and combining the communication signal and the local signal after the adjusting. Claim 83 is allowable over the prior art of record.

Referring to Fig. 2 of MacLellan, it is clear that signal 214 is directly applied to mixer 208 without any adjustment. Further, no adjustment of signal 214 responsive to the communication signal is provided. MacLellan fails to disclose or suggest reducing an amplitude of a component of the communication signal comprising adjusting the local signal responsive to the communication signal and combining the communication signal and the local signal after the adjusting. Claim 83 recites limitations not shown or suggested in the prior art of record and claim 83 is allowable for at least this reason.

The claims which depend from independent claim 83 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Applicants respectfully request clarification of any rejection of the claims if such claims are not found to be allowable in the next Action. In the event that a rejection of the claims is maintained with respect to the prior art, or a new rejection made, Applicants respectfully request identification in such asserted references of elements which allegedly correspond to limitations of the claims in accordance with 37 C.F.R. §1.104(c)(2). In particular, 37 C.F.R. §1.104(c)(2)

provides that *the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.* Further, 37 C.F.R. §1.104(c)(2) states that the Examiner must cite the best references at their command. When a reference is complex or shows or describes inventions other than that claimed by Applicants, the particular teachings relied upon must be designated as nearly as practicable. The pertinence of each reference if not apparent must be clearly explained for each rejected claim specified. Applicants respectfully request clarification of the rejections with respect to specific references and specific references teachings therein pursuant to 37 C.F.R. §1.104(c)(2) if any claims are not found to be allowable in the next Action.

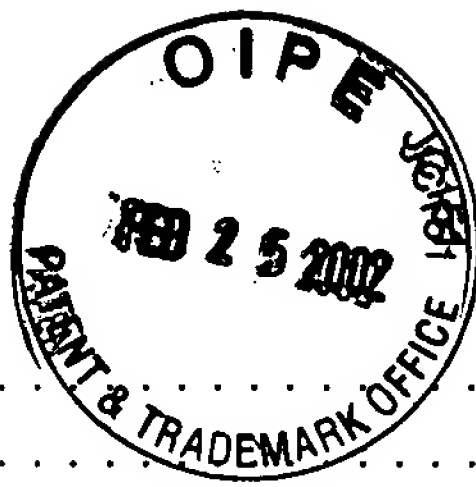
Applicants respectfully request allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,

Dated: 2/25/02

By: 
James D. Shaurette
Reg. No. 39,833



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Inventor Roy Greeff et al.
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Examiner D. Nguyen
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VERSION WITH MARKINGS TO SHOW CHANGES MADE ACCOMPANYING
RESPONSE TO NOVEMBER 23, 2001 OFFICE ACTION

In the Claims

The claims have been amended as follows. Underlines indicate insertions
and ~~strikeouts~~ indicate deletions.

53. (Twice Amended) A communication system comprising:
a communication device configured to receive a continuous wave signal
and to output a modulated continuous wave signal responsive to the receiving;
and
an interrogator configured to reduce an amplitude of a component of the
modulated continuous wave signal having a frequency of the continuous wave
signal while substantially maintaining an amplitude of another component of the
modulated continuous wave signal having another frequency;
wherein the interrogator is configured to reduce the amplitude of the
component prior to demodulation of the modulated continuous wave signal.

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60. (Amended) An interrogator comprising:

a receiver configured to receive a continuous wave signal having a frequency and a modulated continuous wave signal, the receiver being further configured to reduce an amplitude of a component of the modulated continuous wave signal having the frequency of the continuous wave signal using the continuous wave signal while substantially maintaining an amplitude of another component of the modulated continuous wave signal having another frequency;

wherein the receiver is configured to reduce the amplitude of the component prior to demodulation of the modulated continuous wave signal.

64. (Twice Amended) An interrogator comprising:

a receiver configured to receive a local signal and a communication signal, the receiver being further configured to adjust the local signal responsive to the communication signal and to reduce an amplitude of a component of the communication signal ~~responsive to the communication signal~~ having a first frequency using the adjusted local signal while substantially maintaining an amplitude of another component of the communication signal having another frequency.

70. (Amended) A communication method comprising:

communicating a continuous wave signal having a frequency;

communicating a modulated continuous wave signal responsive to the

continuous wave signal using a communication device;

receiving the modulated continuous wave signal; and

reducing an amplitude of a component of the modulated continuous wave signal having the frequency of the continuous wave signal after the receiving while substantially maintaining an amplitude of a component of the modulated continuous wave signal having a frequency different than the frequency of the continuous wave signal;

wherein the reducing comprises reducing prior to demodulation of the modulated continuous wave signal.

77. (Twice Amended) A communication method comprising:

providing a continuous wave signal;

modulating the continuous wave signal providing a modulated continuous wave signal to communicate information;

receiving the modulated continuous wave signal; and

after the receiving, reducing an amplitude of a component of the modulated continuous wave signal having a frequency of the continuous wave signal while substantially maintaining an amplitude of another component of the modulated continuous wave signal having another frequency;

wherein the reducing comprises reducing prior to demodulation of the modulated continuous wave signal.

90. (Amended) The system of claim 53 wherein the interrogator is configured to reduce the amplitude of the component prior to quadrature demodulation of the modulated continuous wave signal.

92. (Amended) The interrogator of claim 60 wherein the receiver is configured to reduce the amplitude of the component prior to quadrature demodulation of the modulated continuous wave signal.

96. (Amended) The method of claim 70 wherein the reducing comprises reducing prior to quadrature demodulation of the modulated continuous wave signal.

99. (Amended) The method of claim 77 wherein the reducing comprises reducing prior to quadrature demodulation of the modulated continuous wave signal.

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